## **ABSTRACT**

The invention relates to a device for photometric measurement of the concentration of a chemical substance in a solution, including: a lamp (1), which emits electromagnetic radiation in a predetermined wavelength range; a first receiving unit (6) in a measuring branch (MB), which receives the radiation transmitted through the solution at a first wavelength; a second receiving unit (7) in a reference branch (RB), which receives the radiation transmitted through the solution at a second wavelength; and a control/evaluation unit (8), which, depending on the conditions present at the measuring site, uses the intensity values determined either by the measurement branch (MB) or by the reference branch (RB), in order to control the intensity of the radiation emitted by the lamp (1), such that the resulting, measured values are highly plausible.

(Fig. 2)